Annual Drinking Water Quality Report

Publication date: July 1, 2012

City of Rockville • Department of Public Works

PWS ID No. 00150003

Dear Valued Customer,

The City of Rockville provides water to approximately 46,900 people 24 hours a day, seven days a week. We are dedicated to quality service and delivering water that protects your family's health. In 2011, we worked hard to meet and exceed all our water quality goals and we invite you to take a moment to review this Water Quality Report for more information about your drinking water.

In 2011, the water treatment plant operators showed extraordinary leadership by enrolling Rockville's water treatment plant in the Partnership for Safe Drinking Water, a voluntary effort between six drinking water organizations and more than 200 water utilities across the United States. Our goal is to provide additional measures of safety to our customers by implementing prevention programs where regulation does not already exist.

The City of Rockville wants its customers to receive the best possible water at the best possible rate. We continue to plan for a long-term strategy to provide quality water at a reasonable cost, while keeping up with demands to comply with regulations, renew aging infrastructure and provide adequate fire flow. I presented our plan to the Mayor and Council on March 5, 2012. We scrutinized our operational, maintenance and engineering strategies to ensure that we address the challenges and plan for a sustainable water system. We were able to identify $13.9 million reduction in Water Capital Projects over the next four years. This significant reduction is what staff has been striving to achieve to keep rates at a reasonable level given our need to address our aging infrastructure and comply with new and stringent water quality regulations. You can watch the presentation at www.rockvillemd.gov.

Thank you for your support. We look forward to serving you and ensuring safe, reliable drinking water.

Craig Simoneau, Director of Rockville Public Works

Is my water safe?

The City of Rockville's drinking water is safe as set forth in the regulations set by the United States Environmental Protection Agency (EPA) and adopted and enforced by the Maryland Department of the Environment (MDE). For the 2011 calendar year, the City met all water quality requirements and did not have any drinking water violations.

The Water Quality Data Table shown on page 2 of this report lists all the drinking water contaminants that were detected. None of these contaminants exceeded the drinking water standards. This report will help to inform you about the quality of your water and includes details about where your water comes from, what it contains and how it compares to standards set by state and federal regulatory agencies.

Why are contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water hotline at 1-800-426-4791.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity, including:

- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming;
- Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities;
- Microbial contaminants, such as viruses and bacteria, that may come from wastewater treatment plants, septic systems, agricultural livestock operations and wildlife;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses; and

City of Rockville Get Into It

Water Quality Data Table

CONTAMINANTS	MCLG OR MRDLG	MCL, TT OR MRDL	TEST RESULTS	RANGE LOW	RANGE HIGH	SAMPLE YEAR	IS THIS A VIOLATION?	TYPICAL SOURCE
WATER TREATMENT PLANT PERFORMANCE								
Turbidity (NTU)[1]	N/A	TT=0.3	0.04	0.01	0.19	2011	No	Soil runoff
[1]Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Our turbidity results are 100%< 0.3 NTU; a value less than 95% constitutes a turbidity violation.								
Residual Chlorine (ppm)	4	TT>0.2	2.1	1.0	3.9	2011	No	Water additive to control microbial contaminants
INORGANIC CONTAMINANTS								
Arsenic (ppm)	0	0.01	0.0047	NA	NA	2011	No	Erosion of natural deposits; runoff from orchards or glass and electronic production wastes
Barium (ppm)	2	2	0.045	NA	NA	2011	No	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Chromium (ppm)	0.1	0.1	0.0028	NA	NA	2011	No	Erosion of natural deposits; discharge from steel and pulp mills
Fluoride (ppm)	4	4	0.6	0.4	0.8	2011	No	Water additive that promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	1.3	NA	NA	2011	No	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks; sewage
WATER DISTRIBUTION SYSTEM								
Total Coliform % positive samples per month	0	5	0[2]	0	0	2011	No	Naturally present in the environment
[2] 602 total samples tested. Minimum sampling frequency is 50 samples per month.								
DISINFECTANTS & DISINFECTANT BYPRODUCTS[3]								
Residual Chlorine (ppm), measured as free chlorine	4.0	4.0	1.1[4]	0.2	2.1	2011	No	Water additive to control microbial contaminants
Total Trihalomethanes (ppb)	NA	80[5]	52.0[6]	20.1	102.1	2011	No	Byproduct of drinking water chlorination
Haloacetic Acids (ppb)	NA	60[5]	32.0[6]	13.3	50.2	2011	No	Byproduct of drinking water chlorination
[3]There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants. [4]Annual average. [5]Running annual average. [6]Highest running annual average.								
METALS @ CONSUMER TAPS								
Copper (ppm)	0	1.3 (AL)	0.17	0.032	0.57	2010[7]	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	0	15 (AL)	2.7	<2	12	2010[7]	No	Corrosion of household plumbing systems; erosion of natural deposits
[7]Copper and lead testing is required every three years, with the next testing due in 2013.								

- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly and infants can be at risk from infections. These people should seek advice about drinking water from their health care providers. EPA and the Centers for Disease Control (CDC) issue guidelines on appropriate measures to reduce the risk of infection by *Cryptosporidium* and other microbial contaminants. Call the EPA Safe Drinking Water hotline at 1-800-426-4791 for more information.

Additional information for lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Rockville is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the EPA Safe Drinking Water Hotline at 1-800-426-4791 or at www.epa.gov/safewater/lead.

Where does my water come from?

Our primary source of water is the Potomac River. When Rockville's water plant is not operating because of necessary improvements or maintenance activities, or in cases of regional drought, Rockville purchases water from the Washington Suburban Sanitation Commission (WSSC). In 2011, Rockville purchased about 5.5 million gallons of water (approximately 0.3 percent of our annual production) from WSSC, which also receives its water from the Potomac River.

Source water assessment and its availability

The Maryland Department of the Environment (MDE) performed a source water assessment of the Potomac River as it applies to the Rockville water plant. The 2002 report may be obtained online or by contacting the Water Supply Program at MDE, 1800 Washington Blvd., Baltimore, MD 21230. You can also call 410-537-3714. For more information on the Maryland Source Water Protection Program, go to www.mde.state.md.us/programs/Water/Water_Supply/Source_Water_Assessment_Program.

For more information please contact:

Vernon Simmons, Water Plant Superintendent
Phone: 240-314-8556 • E-mail: vsimmons@rockvillemd.gov

Our primary method of distributing this report is through Rockville Reports, the City's monthly newsletter. Please share this information with all other people who drink City of Rockville water, especially those who may not have received this notice directly (for example, those who live in apartments, nursing homes, or to schools and businesses). You can do this by posting this Drinking Water Quality Report in a public place or by distributing copies. This Drinking Water Quality Report will also be posted online at www.rockvillemd.gov.

This report is required by the United States Environmental Protection Agency and the Maryland Department of the Environment.

The table to the left lists all of the drinking water contaminants that were detected during calendar year 2011. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in calendar year 2011. The EPA and MDE allow us to monitor for certain contaminants less than once per year because the concentration of these contaminants does not change frequently.

Definitions Used in this Report

Unit Descriptions are as follows:

TERM	DEFINITION
NTU	Nephelometric Turbidity Unit
ppm	Parts per million, or milligrams per liter (mg/L). 1 ppm is like one drop in 10 gallons of water.
ppb	Parts per billion, or micrograms per liter (µg/L). 1 ppb is like one drop in 10,000 gallons of water.
NA	Not Applicable
ND	Not Detected (by a test procedure)

Important Drinking Water Definitions:

MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs ensure a margin of safety for sensitive individuals.
MRDLG	Maximum Residual Disinfection Level Goal: The level of a drinking water disinfectant below which no health risk is known or expected. MRDLGs do not reflect the benefits of using disinfectants to control microbial contaminants.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
MRDL	Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

How is my water treated?

The City of Rockville's Water Treatment Plant was put into service in 1958 and, at that time, was capable of producing 4 million gallons per day (MGD) of treated water. The plant was upgraded in 1967 to increase production to 8 million gallons per day. In the mid-1990's additional upgrades to the plant were made to meet EPA and MDE regulations. Since then, an average of 5 million gallons per day of raw (untreated) water is withdrawn from the Potomac River, treated at the water plant and distributed to the City's water customers. Once at the plant, the water is put through a six-step treatment process to ensure the drinking water meets Safe Drinking Water Act standards. Once treated, the water is sent through a series of underground water lines and water storage tanks to your faucet.

The river water is treated to remove suspended sediments, algae, parasites, bacteria and metals through the following processes.

Screen

Water from the Potomac is pumped through a screen to remove large debris such as sticks, leaves and rocks. If algae blooms are present in the raw water withdrawn from the river, it is treated with potassium permanganate.

Coagulation

Water is treated with compounds that make small suspended particles stick together and settle out of the water. This particle conglomerate is removed from the water prior to filtration.

Sedimentation

Water is passed through a settling basin or clarifier allowing time for mud, sand, metals and other sediment to settle out.

Filtration

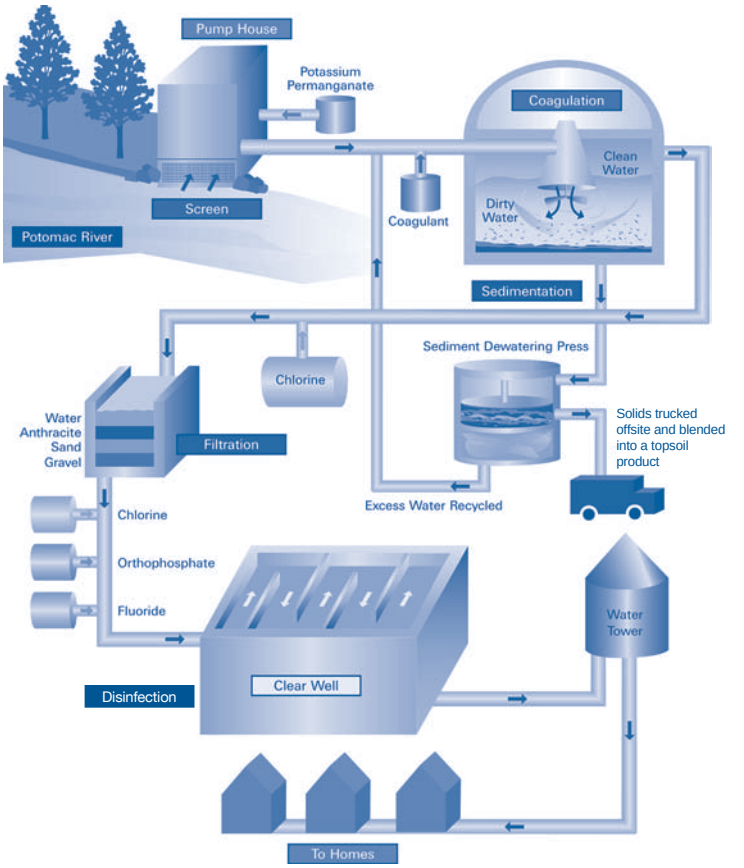
Water is passed through a dual media (sand and anthracite) filter, which removes many remaining contaminants.

Disinfection

Chlorine is added to the water to kill and/or inactivate any remaining pathogens. Fluoride is added to prevent tooth decay and a corrosion inhibitor is added to preserve the pipes that deliver the water to homes and businesses.

To Homes

The treated water is stored in three storage tanks and is gravity-fed to houses and businesses when needed. The water is sampled at the plant, in the distribution system and at the tap in homes and businesses for lead, copper, other potentially harmful chemicals, bacteria and residual chlorine.



"This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it."

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

이 보고서에는 귀하의 식수에 대한 중요한 내용이 실려있습니다. 그러므로 이 보고서를 이해할 수 있는 사람한테 번역해 달라고 부탁하시기 바랍니다.

此報告包含有關您的飲用水的重要資訊。請人幫您翻譯出來，或請能看懂此報告的人將內容說給您聽。

В этом сообщении содержится важная информация о воде, которую вы пьёте. Попросите кого-нибудь перевести для вас это сообщение или поговорите с человеком, который понимает его содержание.

CITY OF ROCKVILLE
111 Maryland Avenue, Rockville, MD 20850 • 240-314-8500 • www.rockvillemd.gov